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CORPORATE CRIMINAL LIABILITY POST ELIMINATION OF COAL FABA WASTE STATUS FROM B3 WASTE CATEGORY IN

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ABSTRACT

Kajian ini menganalisis permasalahan hukum terkait penghapusan status limbah batubara fly ash dan bottom ash (FABA) dari kategori limbah bahan berbahaya dan beracun (B3) akibat diundangkannya Peraturan Gubernur Nomor 22 Tahun 2021 tentang Penyelenggaraan Lingkungan Hidup. Perlindungan dan Manajemen. Penelitian preskriptif terapan ini bertujuan untuk menjelaskan akibat kebijakan hukum terhadap konsep pertanggungjawaban pidana korporasi ketika korporasi melakukan tindak pidana di bidang pengelolaan limbah FABA batubara di Indonesia yang kini tidak lagi termasuk dalam kategori limbah bahan berbahaya dan beracun. (B3). Hasil penelitian menunjukkan bahwa penerapan sanksi pidana pengelolaan limbah FABA batubara sepanjang tahun 2014 hingga 2020 tidak menunjukkan adanya restorasi maupun reklamasi yang signifikan di lokasi kawasan tercemar. Saat ini, konsep mekanisme pengelolaan limbah FABA batubara yang tidak lagi menggunakan standar limbah B3 yang ketat berpotensi menimbulkan permasalahan terkait ancaman kelestarian lingkungan di zona pembangkit. Selain itu, ketentuan Pasal 88 UUPPLH tidak berlaku untuk tanggung jawab perusahaan limbah FABA. Penelitian hukum ini termasuk penelitian hukum normatif dengan pendekatan perundang-undangan, pendekatan konseptual. Teknik pengumpulan data dilakukan dengan metode studi kepustakaan.

This study analyzes legal issues related to the elimination of fly ash and bottom ash (FABA) coal waste status from the hazardous and toxic waste category (B3) as a result of the promulgation of Governor Regulation No. 22 of 2021 on the Implementation of Environmental Protection and Management. This applied prescriptive study aims to explain the consequences of the legal policy on the concept of corporate criminal liability when corporation is committing criminal acts in the field of coal FABA waste management in Indonesia, which now is no longer belonged to the hazardous and toxic waste category (B3). The result showed that the implementation of penal sanctions on coal FABA waste management throughout 2014 to 2020 did not show any significant restoration nor reclamation in the location of contaminated area. At this time, the concept of coal FABA waste management mechanism which is no longer use strict B3 waste standards potentially raise problems related to environmental sustainability threats in the

power plant zone. Moreover, the provisions of Article 88 UUPPLH is unapplicable to FABA waste corporate liability. This legal research belongs to normative legal research with statutory approach, conceptual approach. Data collection techniques are carried out with library study methods..

A. INTRODUCTION

As a country that has abundant natural resource reserves, Indonesia is faced with large natural resource exploitation activities, both by individuals and by legal entities (corporations). In order to ensure that the implementation of these natural resource utilization activities remains in the spirit of sustainable ecocentrism and does not harm the environment, Indonesia then enacted Law Number 32 of 2009 concerning Environmental Protection and Management (UUPPLH). One of the natural resource reserves that has the largest percentage of utilization in Indonesia is coal energy, where the majority of its utilization is allocated to the development sector to meet the needs of electricity in the country. The Ministry of Energy and Mineral Resources (ESDM) noted that the contribution of coal energy installed from PLTU as of May 2020 reached 35,216 MW or equivalent to 49.67% of the total national capacity of 70,900 MW, which means that it outperforms the use of other electrical energy sources such as gas and electricit, new and renewable energy.[1]

The consequence of the large use of coal as fuel to drive this steam power plant is the large capacity of waste combustion waste in the form of fly ash and bottom ash (FABA). On the one hand, empirically development activities that are often in close contact with environmental media are related to the availability of raw materials to support development and the availability of development sites which directly or indirectly often raise problems for the existence of the environment.[2] Positively, Law Number 11 of 2020 concerning Job Creation (UU Cipta Kerja) has formed a new concept on environmental governance in the development roadmap in Indonesia, in this case is the reformulation of waste types based on the level of hazardousness that legitimized in Attachments IX and XIV of Government Regulation Number 22 of 2021 concerning Implementation of Environmental Protection and Management as implementing regulations of the Job Creation Law. In this regulation, there is a significant change where one type of waste sourced from the largest contributor of coal waste in Indonesia, namely coal FABA waste at steam power plant industrial facilities is officially removed from the category of hazardous and toxic waste (B3). This type of waste is fly ash waste (Waste Code/KL: B409) and coal bottom ash (KL: B410) which is regulated in the list of non-B3 waste specific specific sources in Appendix IX and Appendix XIV of PP Number 22 of 2021, which is an integral part of integral part of the regulation. PP Number 22 of 2021

1 Vincent Fabian Thomas, *Energi Fosil Sumbang 85% Listrik RI per Mei 2020, Terbanyak PLTU*, 2020, https://tirto.id/energi-fosil-sumbang-85-listrik-ri-per-mei-2020-terbanyak-pltu-fU1K accessed on 9 September 2021 pukul 08.33 WIB.

2 Ridho Kurniawan, Pertanggungjawaban Pidana Korporasi Berdasarkan Asas Strict Liability, *Jurnal Yuridis*, Vol.1 No.2, 2014, page.154.

officially eliminates coal FABA waste originating from the combustion process at Electric Steam Power Plant (here and after we will use PLTU term wich is refers to Electric Steam Power Plant in Indonesia) facilities from the category of B3 waste which is then categorized as non-B3 waste in Appendix XVI of PP Number 22 of 2021.

The change in the categorization of coal FABA waste from its original status as B3 waste to non-B3 has implications for the pattern of corporate criminal liability related to environmental crimes in the waste management sector, which in this paper will specifically examine coal FABA sourced from PLTU facilities. After the shift in the categorization of coal FABA waste sourced from PLTU facilities which are status quo as a type of non-B3 waste, the community is faced with a gray condition related to corporate criminal liability if the corporation commits a criminal act, both violations and crimes related to the management of the coal FABA waste. Normatively, protection of environmental quality related to the management of both B3 and non-B3 waste has been regulated in Chapter VII and Chapter XV of Law Number 32 of 2009 concerning Environmental Protection and Management (UUPPLH). Providing criminal sanctions for waste management actions that violate the provisions of laws and regulations with the threat of criminal sanctions being fines, confinement, to imprisonment. Contextualization with the promulgation of Government Regulation Number 22 of 2021 is the shifting of the concept of punishment for the criminal act of managing coal FABA waste originating from PLTU facilities from what previously referred to the criminalization of B3 waste to the criminalization of non-B3 waste. The logical consequence of this legal fact is that the absolute responsibility that can initially be imposed on the PLTU provider corporation cannot be implemented, where this absolute responsibility only attaches to acts of violation of B3 waste management, as regulated in Article 88 of the UUPPLH.

Therefore, the authors are interested in researching and studying the implications of eliminating FABA waste at PLTU facilities on corporate criminal liability so that it can be seen how corporations carry out criminal liability related to the management of coal FABA waste at PLTU facilities that violate the provisions of UUPPLH after the paradigm shift of coal waste categorization in Regulation Government Number 22 of 2021 concerning Implementation of Environmental Protection and Management.

B. RESEARCH METHODS

This research belongs to the type of normative research using a statutory approach and a conceptual approach which is carried out using a literature study method. Therefore, in this study, two main issues will be examined, namely: 1) How is the legal political analysis and the impact of eliminating the status of coal fly ash and bottom ash (FABA) from the category of hazardous and toxic waste (B3) on environmental sustainability. ?; 2) What are the legal consequences of eliminating coal fly ash and bottom ash (FABA) from the category of hazardous and toxic waste (B3) after the promulgation of Government Regulation Number 22 of 2021 concerning the Implementation of Environmental Protection and

Management for corporate criminal liability?

C. RESULTS AND DISCUSSION

1. Legal Political Analysis and Impact of Eliminating Coal Fly Ash and Bottom Ash (FABA) Waste from the Hazardous and Toxic (B3) Waste Category on Environmental Sustainability.

a. Definition and Characteristics of Coal Fly Ash and Bottom Ash (FABA) Waste.

Coal FABA waste or coal ash is a solid waste sourced from coal burning activities at a steam power plant (PLTU). Fly ash (fly ash) has fine grains, gray in color, and contains chemical elements consisting of silica (SiO2), alumina (Al2O3), ferrous oxide (Fe2O3), and several other additional chemical elements. 2008). While bottom ash is a mixture of coal ash, quartz sand, and eroded furnace walls that occurs during the combustion process.[3] The toxic components found in coal consist of barium, beryllium, boron, cadmium, chromium, cobalt, lead, lithium, manganese, mercury, radium, thallium, selenium, vanadium, strontium, etc. The toxic substance is actually more concentrated in the ash particles from the combustion residue compared to the raw coal.[4] Some heavy metal content in coal ash in Indonesia is higher than the global average such as the United States, such as elements of boron, cobalt, chromium, nickel, manganese, vanadium, selenium, and mercury.[5] Therefore, the leaching of coal ash in Indonesia for these eight metal elements has a greater potential than other countries to cause significant environmental damage and decrease human health status.

Solid waste in the form of FABA generated during the coal combustion process has a percentage of 5-20% of the weight of the coal used (depending on the combustion technology applied). Therefore, due to the large consumption of coal, the pollutants produced by the PLTU are also large.[6] The consumption of coal in Indonesia as a raw material for electricity generation in 2021 can be seen in the following table:[7]

Energy sources	Percentage
Coal	38 %
Crude oil	32 %
Gas	19 %
EBT	11,2 %

3 Hadi Winarno, Pemanfaatan Limbah Fly Ash dan Bottom Ash dari PLTU Sumsel-5 sebagai Bahan Utama Pembuatan Paving Block, *Jurnal Teknika,* No 1, 2019.

4 U.S. Environmental Protection Agency, Report to Congress: Wastes from the Combustion of Fossil Fuels, 1999, page. 3-17.

5 R. Lin, dkk, Evaluation of Trace Elements in U.S. Coals Using the USGS COALQUAL Database Version 3.0. Part I: Rare Earth Elements and Ytrium (REY), *Elsevier: International Journal of Coal Energy*, Vol.192, 2018, page. 1-13.

6 Teddy Praasetyawan, Kontroversi Penghapusan FABA dari Daftar LImbah B3, *Info Singkat Bidang KEsejahteraan Sosial,* Volume XIII, Nomor 7/I/Puslit/April/2021, 2021, page.14.

7 Ministry of Energy and Mineral Resources (ESDM).

From these data, it can be concluded that Indonesia still has a dependence on fossil energy sources with coal being the energy source with the largest use, so that in line with the percentage of pollutants produced in the coal burning process, which is 5-20%, the logical consequences that arise are: is the FABA waste that is generated is also large. The logical consequence that arises is that the FABA waste produced is also large. Especially during the Covid-19 pandemic, energy consumption is increasing with the electrification ratio of coal use of 99.2%.[8]

As an inventory, the following describes the impact variables caused by coal FABA on environmental sustainability and human health if it is not managed using B3 waste management standards or at least using systematically mitigated waste management standards:

1) The potential hazard of coal FABA waste to humans comes from the components of arsenic and hexavalent chromium, lithium, molybdenum, manganese, and vanadium contained in coal FABA waste. Arsenic has carcinogenic properties when consumed in the long term,[9] lithium can cause psychiatric and neurological effects, renal, gastrointestinal, and cardiovascular effects, skin eruptions, and reduced thyroid function,[10] Molybdenum can cause anemia and high uric acid levels when ingested,[11] Manganese can cause damage to the nervous system, brain, and liver function,[12] while vanadium can cause kidney, lung, and blood damage.[13]
2) The potential dangers of coal FABA waste to groundwater can be seen concretely, for example in the United States, China, and India. In the United States, there are at least 24 cases of groundwater contamination in private wells from leaking coal ash disposal facilities and the use of coal ash as backfill material throughout the city, especially in the Town of Pines, Indiana.[14] Meanwhile in China, a 2020 study of fly ash leachate in China found that there is a high risk of groundwater contamination when coal ash is exposed to acid rain. This can cause disruption to human health through the food chain, in addition to causing

8 Ministry of Energy and Mineral Resources, *Data Bauran Sumber Energi Primer Indonesia 2021*, 2021, https://www.esdm.go.id/id/publikasi/infografis accessed on 13 Desember 2021 pukul 10.45 WIB.

9 U.S. Environmental Protection Agency, *Human and Ecological Risk Assesment of Coal Combustion Residuals*, 2014.

10 Max Blau, *The Coal Plant Next Door: With Dangerous Hearth Patterns Evident, Plant Owners Engaged the System to Avoid Responsibility*, 2021, https://thecurrentga.org/2021/03/22/the-coal-plant-next-door/ accessed on 6th January 2022 pukul 13.04 WIB.

11 *Ibid.*

12 William M., dkk, *Toxicological Profile for Manganese*, 2012.

13 *Ibid.*

14 Earthjustice, Mapping the Coal Ash Contamination, 2019, https://earthjustice.org/features/coal-ash-contaminated-sites-map accessed on 7th January 2022 at 11.20 WIB

groundwater pollution.[15] Meanwhile in India, testing in 2019 at 27 groundwater points found arsenic contamination from fly ash or fly ash that exceeded the national consumption water quality standard.[16]

3) The potential hazard of coal FABA waste to surface water was discovered at least in 2015 in a study conducted by the United States Environmental Protection Agency (US EPA) where it was found that coal ash contamination of surface water can cause further contamination of aquatic animals (eg commodities fish) at levels that are dangerous for human health. Exposure to arsenic in fish poses a high carcinogenic risk, besides that there are also non-cancer risks posed to human health from other metal content such as mercury, thallium cadmium, and selenium.[17]
4) The potential hazard of coal FABA waste to soil and vegetation can be seen in a study in China in 2017 which showed that more than 90% of the cabbage that was used as research subjects contained lead levels that exceeded the permitted quality standards,[18] while about 30% contain arsenic levels that exceed the maximum allowed.
5) The potential hazard of coal FABA waste to aquatic animals and livestock is correlated with the element selenium in coal ash which can accumulate in benthic organisms (bottom feeders in marine ecosystems) and can expand the food chain through fish commodities.[19] The potential hazard of coal FABA waste to aquatic animals and livestock is correlated with the element selenium in coal ash which can accumulate in benthic organisms (bottom feeders in marine ecosystems) and can expand the food chain through fish commodities.[20]
6) The potential danger from dust from coal FABA waste (air pollution) arises because small and fine particles of fly ash or fly ash are easily carried by the wind and move out of the coal ash storage area. Although regular spraying can help reduce dust escape, in reality there is a need for more closed structures (eg

15 X. Huang, dkk, Heavy Metal Pollution and Ecological Assessment Around the Jinisha Coal-Fired Plant (China), *International Journal of Environmental Research and Public Health*, Vol.14th, 2017, page. 690-696.

16 I. Khan, Rashid Umar, Environmental Risk Assesment of Coal Fly Ash on Soil and Groundwater Quality (Aligarh, India), *Elsevier: Groundwater for Sustainable Development*, Volume 8th, 2019, page. 346-357.

17 U.S. Environmental Protection Agency, Human and Ecological Risk Assesment of Coal Combustion Residuals, 2014, page. 2-21.

18 X. Huang, dkk, Heavy Metal Pollution and Ecological Assessment Around the Jinisha Coal-Fired Plant (China), *International Journal of Environmental Research and Public Health*, Vol.14th, 2017.

19 John Risher, dkk, *Toxilogical Profile for Selenium*, 2003, page. 283.

20 A. Lemly, J. Skorupa, Wildlife and the Coal Waste Policy Debate: Proposed Rules for Coal Waste Disposal Ignore Lessons from 45 Years of Wildlife Poisoning, *Environmental Science and Technology,* Vol. 46th, No 16th, 2012.

silos) that can increase the effectiveness of preventing fly ash from moving out of the area.[21]

Based on this description, it can be concluded that the chemical elements in coal FABA particles have persistent, bioaccumulative, and toxic (PBT) properties. Study studies in various countries have shown the consequences of exposure to coal FABA waste that are not managed with a systematic mitigation mechanism and exceed the environmental carrying capacity threshold, especially when there is a process of transportation, stockpiling, and disposal that is not in accordance with FABA waste management procedures. coal that is adapted to the characteristics of the coal FABA waste itself, it will cause a destructive impact on the environmental ecosystem. The environment that has been exposed to coal FABA elements will eventually cause harm to human health due to the food chain and human needs which basically depend on the environment itself, including the dangers that arise when humans are constantly in contact with exposure to FABA waste. coal directly.

Pollution and environmental damage due to coal FABA waste in Indonesia so far have not been officially published by the relevant institutions or institutions in a transparent manner, making it difficult to track the amount of pollution in statistical form. However, several studies presented through journals and scientific articles have shown the facts of pollution and environmental damage due to coal FABA waste in Indonesia in various areas around the PLTU circle which causes a destructive condition in the PLTU circle, both to natural and human ecosystems. . Several major documentations related to pollution and environmental damage due to coal FABA waste in Indonesia in the period 2014-2020 when Government Regulation Number 101 of 2014 was still in effect (coal FABA waste was still classified as B3 waste) can be seen in the case of storing coal FABA waste coal without a permit by PLTU Cilacap (in 2018) where the PLTU managed by PT. Sumber Segara Primadaya in Cilacap Regency, Central Java does not have an adequate and sufficient waste storage area to store coal ash waste from electricity production activities of 3000 MW, resulting in illegal waste disposal on nearby land. This violation actually has a criminal sanction as an act of stockpiling B3 waste without a permit and in its course it often ensnares smaller coal-fired power plants, but the Cilacap PLTU with its very large production volume has not received criminal sanctions.[22]

Apart from PLTU Cilacap, PT. Indominco Mandiri/PT. IMM (year 2017). in 2017 the Tenggarong District Court imposed criminal sanctions on PT. Indominco Mandiri in the form of a fine of 2 billion rupiah through Decision No: 526/PidSus-Lh/2017/Pn.Trg. The coal ash storage bin used by PT IMM is only 18m x 12m, much narrower than

21 Margaretha Quina, dkk, *Resiko Kelabu Abu Batu Bara,* 2021, page.9.
22 Margaretha Quina, dkk, *Resiko Kelabu Abu Batu Bara*, 2021, page.22.

the minimum requirement for ash storage in the permit document obtained by PT IMM in 2016 which requires the size of the shelter to be 24m x 60m. However, even though a criminal fine has been imposed on PT IMM, a report from the parent corporation PT IMM indicates that the fine has no impact on the company's finances and operations (Annual Report of PT. Indo Tambangraya Megah, Tbk: 2017). Site restoration as an obligation that must be carried out by PT IMM since the decision was read in 2017 especially on the ash disposal mechanism stipulated through the Decree of the Kutai Kartanegara Regent No.660.1/SK-21/B.1.2-TPS/BPLHD/II/2015 dated 10 February 2015 is also not clearly published.

In addition to illegal acts related to coal FABA waste management carried out by PLTU Cilacap and PT. Indominco Mandiri, a similar crime was also committed by PLTU Panau in the form of illegally dumping coal ash waste as B3 waste in 2016 which led to an increase in deaths from cancer or lung disease in the period 2016-2018 including the incidence of disease in children. child,[23] PT. PRIA in the form of selling coal FABA waste as backfill material to the community without any characteristic tests or waste encapsulation first, so that since 2015 people began to experience skin irritation, PT. Indo Bharat Rayon which carried out the illegal disposal of coal ash waste in 2016 which caused the contamination of the disposal site in Rawa Kalimati which is connected to the Citarum River (can be seen in Decision No. 113/Pid.B/LH/2016/PN.Pwk), and PT. Nuryeni who also carried out the illegal disposal of coal FABA waste in 2018, where this act caused contamination of toxic materials in rice harvested in the rice fields of residents due to the leaching process of coal ash on site (can be seen in Decision No. 238/Pid.Sus- LH/2018/PN Pwk).

There are several patterns of common weakness from each imposition of criminal sanctions in these cases, namely the criminal sanctions imposed often do not have a significant impact on the company's operational activities so that it can be said that it does not have the expected deterrent effect. In addition, the obligation to reclaim the affected environment imposed on the corporation has not been carried out optimally by the corporation and is not monitored massively so that the affected environment does not experience complete repair. Based on the above explanation of criminal acts in the management of coal FABA waste by corporations during 2014-2021 above, it can be concluded that during the legal regime of Government Regulation Number 101 of 2014 concerning Management of Hazardous and Toxic Waste, which at that time regulated the status of FABA Coal as a type of hazardous and toxic waste (B3) still has law enforcement loopholes. Several judges' decisions based their considerations on the status of coal FABA waste as B3 waste so that in imposing criminal sanctions based on UUPPLH related to B3 waste management penalties are often less effective. This can be seen from

23 *Ibid,* page.25.

the criminal sanctions given to corporations that do not have a significant effect on the company's operational capabilities and the obligation to repair environmental damage is not optimal. In fact, in some cases there has been a repetition of criminal acts and obligations to improve the environment due to pollution that have not been implemented.

b. Legal Politics in Eliminating the Status of Coal Fly Ash and Bottom Ash (FABA) Waste in Government Regulation Number 22 Year 2021

The existence of environmental law is one of the methods in implementing development law as a whole on a national scale. Therefore, in essence, environmental law and development law must be in harmony as stated by Mochtar Kusumaatmadja, that the role of law is to be able to guarantee the regularity of community change.[24] In the context of Government Regulation Number 22 of 2021, the legal principles of development that are in line with environmental law and tend to be less proportional are shown by the lack of accurate and credible research-based data in deciding the new norm in the form of eliminating coal FABA waste from the B3 waste category, because the true existence of law development and environmental law in a legal product in the environmental field must be in harmony. Environmental law is not a single legal regime but is also related to other legal regimes as stated by Bagir Manan, so that the concepts of environmental management, utilization and protection must be regulated in a harmonious legal regime in order to achieve order in the environmental sector itself.[25]

Changes in the status of coal FABA waste from PLTU facilities which were originally B3 waste to non-B3 waste which resulted in waste management now referring to non-B3 waste management standards. Even though of course the standard for managing non-B3 waste is not stricter and more careful than the standard for managing B3 waste. This then has a potential effect on the coal residue produced from the PLTU unit which is vulnerable to not being ready to be transferred to the disposal or storage media until it is utilized with non-B3 waste treatment. Thus, the potential for environmental damage and pollution is greater. Furthermore, when there is damage and pollution of the environment, B3 waste cannot be penalized, nor can B3 waste exist as an aggravation of criminal sanctions.[26] It is at this point that the impact on the environment occurs which is often a follow-up impact of a development policy, that the existence of the environment is unavoidable from the scope of social costs that must

24 Mochtar Kusumaatmadja, *Konsep-Konsep Hukum Dalam Pembangunan*, PT Alumni, Bandung, 2006), page.191.

25 Bagir Manan, *Sistim Peradilan Berwibawa: Suatu Pencarian,* FH UII Press, Yogyakarta, 2005, page.87.

26 Daud Silalahi, *Hukum Lingkungan Dalam Sistem Penegakan Hukum Lingkungan Indonesia*, PT Alumni, Bandung, 1992, page.168

be sacrificed for the sake of national development through environmental management and utilization.[27]

As a legal product, Government Regulation Number 22 of 2021 cannot be separated from the legal politics that are currently in the circle of policy making. The legal politics then became the background for the agreement on the application of regulations, both from the formulation stage to the application stage. More specifically, due to the broad scope of legal politics, in this case the legal politics in question is legal politics in the criminal law regime, or at least has implications for the functioning of criminal law as derivatives of a regulation. Criminal law politics must use a factual juridical approach in the form of a historical, sociological, and comparative approach in addition to a normative juridical approach as stated by G. Peter Hoefnagels "Criminal policy is the rational organization of the social reactions to crime".[28] Various weaknesses contained in a statutory regulation are a general problem that comes from the interference of interests at the stage of drafting or formulating regulations.[29] This is due to the conflicting interests behind the formation of a legal product or policy, both economic, political, rulers, and the interests of certain groups. The opportunity for the entry of various interests including political interests into the environmental law formulation process is very large, generally covering the interests of the authorities, entrepreneurs, and the community.

From a historical aspect, Indonesia has implemented coal FABA waste management from PLTU facilities with B3 waste treatment for decades since its first regulation in 1994 (can be seen in the Appendix to Government Regulation Number 19 of 1994 concerning Management of Hazardous and Toxic Waste (waste code D223)). Therefore, until 2014 both producers and third parties who manage coal FABA waste must carry out waste management operations as B3 waste, except for producers and third parties who obtain an exception for individual waste. The characteristic tests that may underlie the filing of the exemption include testing for hazard and toxic characteristics, LD-50 toxicological testing twice (values <50 mg/kg for the first test and >50 mg/kg and <5,000 mg/kg for the second), TCLP toxicology test, and subchronic toxicology test as regulated in Article 191-195 of Government Regulation Number 101 of 2014.

Along with the plan to increase electricity production by 35,000 MW in 2014, advocacy for the elimination of the status of coal FABA waste from the B3 waste category began to emerge, most of which

27 Evan Devara, dkk, Inovasi Pendekatan Berbasis Risiko Dalam Persetujuan Lingkungan Berdasarkan Undang-Undang Cipta Kerja, *LITRA: Jurnal Hukum Lingkungan, Tata Ruang, dan Agraria,* Vol.1 No.1, 2021, page. 105.

28 Barda Nawawi Arief, Ruang Lingkup Penegakan Hukum Pidana dalam Konteks Politik Kriminal, *Makalah Seminar*, 1990, page.1.

29 Hartiwiningsih, *Faktor-faktor yang Mempengaruhi Proses Penegakan Hukum Pidana Lingkungan, Cetakan 3,* UNS Press, Surakarta, 2020, page.49.

came from associations of coal entrepreneurs in Indonesia.[30] Law Number 11 of 2020 concerning Job Creation then provides more complex facilities related to B3 waste licensing requirements to abolish criminal sanctions for illegal B3 waste management. Law Number 11 of 2020 concerning Job Creation was further regulated into 49 implementing regulations, including Government Regulation Number 22 of 2021 which revoked Government Regulation Number 101 of 2014. So since the latest government regulation was enacted, the status of coal FABA waste from facilities PLTU legally has been included in the category of registered non-B3 waste.

The narrative of removing coal ash from the list of B3 waste was originally based on the State's efforts to provide a maximum stimulus for coal ash producers to utilize coal ash with a greater capacity. In addition, the association of entrepreneurs in the coal sector wants the status of coal ash waste to become non-B3 waste due to the relatively expensive cost of treating coal ash with B3 waste treatment. The tug of war of interest is an unavoidable part of a regulatory formulation process. Although it must be distinguished between 'power under the law' or 'power by law'',[31] in fact there are several products of legislation which show that Indonesia often uses the concept of 'power by law'.[32] This is indicated by the tug of war of interest, especially in the environmental sector, between stakeholders who have lobbying power and the regulatory regime. Mahfud MD argues that law in relation to politics is a political product itself, where law is the dependent variable and politics is the independent variable.[33] With Mahfud MD's opinion, the legal policy implemented nationally by the government includes a definition of how politics plays its role in influencing the law by paying attention to the pattern of power behind the formulation and enforcement of laws, where the law must also be seen as a subsystem that is not it is impossible to rely heavily on politics, both at the formulation and application stages.

The decision to remove coal ash from the B3 waste category is based on the toxicity test of coal ash samples from 19 PLTU units using the TCLP (Toxicity Characteristic Leaching Procedure) and LD50 methods as stated in Article 278 paragraph (3) and (4) PP Number 22 of 2021, which is a test method that uses 50% of the exposed organisms that have died. Based on the results of this method, the Government concludes that coal ash waste does not have the character of B3 waste. However, the dependency on the TCLP method is not really reliable at this time. This is due to the predicted behavior of coal ash leaching in the field and the LD50 test which is slightly insufficient to conclude a safe disposal and reuse scenario of coal

30 Margaretha Quina, dkk, *Resiko Kelabu Abu Batu Bara*, 2021, page. 17.

31 A.A.G Peters, *Hukum Dan Perkembangan Sosial Buku Teks Sosiologi Hukum Buku Ke III,* Pustaka Sinar Harapan, Jakarta, 1990, page.52

32 Hartiwiningsih, *Hukum Lingkungan dalam Perspektif Kebijakan Hukum Pidana, Cetakan 4,* UNS Press, Surakarta, 2020), page.5

33 Mahfud MD, *Politik Hukum di Indonesia,* LP3ES, Jakarta, 1998, page. 1-2.

ash..[34] The TCLP test method was developed by the U.S. EPA since the 1970s to determine the mechanism for solid waste disposal in urban areas, where TCLP will describe the behavior of waste when exposed to water at a certain pH level which is then adjusted to the pH level of the water at the disposal site.[35] For several years, this method was also used to test coal ash waste. However, in the 2000s, the U.S. EPA found several weaknesses in the TCLP method, so a new test method was developed, namely the LEAF (Leaching Environmental Assessment Framework) method which is able to provide more accurate simulations of the potential for leaching of solid waste, including coal ash waste. The LEAF method was then recommended since 2017 for all safer disposal and reuse of coal ash based on conditions in the field. This is what escapes the consideration of removing coal ash waste from the B3 waste category in Indonesia.

The existence of overlapping interests in the preparation of Government Regulation Number 22 of 2021 also does not indicate the alignment of interests of the parties and the expected environmental orientation. A proportional and adequate policy formulation of regulations can be produced when the mechanism for formulating such regulations is carried out in an ideal manner. This is because the mechanism for formulating regulations is not only about procedural issues, but also involves interested parties related to the purpose of forming a regulation. Interested parties refer to the element of representation (representativeness), the level of involvement (degree of participation), and the influence obtained by a statutory regulation will accumulate towards the fulfillment of the good process rules at the regulation formulation stage.[36]

2. Legal Consequences of Eliminating Coal Fly Ash and Bottom Ash (FABA) from the Hazardous and Toxic (B3) Waste Category Against Corporate Criminal Liability.

a. Corporate Criminal Liability for Offenses in the Coal FABA Waste Management Sector in the Hazardous Waste Management Framework (before the enactment of PP Number 22 of 2021 concerning Implementation of Environmental Protection and Management)

1) The Concept of Coal FABA Waste Management as Hazardous and Toxic Waste (B3).

In general, the clause on the obligation to manage hazardous and toxic waste has been regulated in the provisions of Article 59 Paragraph (1) of Law Number 32 of 2009 concerning Environmental Protection and Management. Meanwhile,

34 Margaretha Quina, dkk, *Resiko Kelabu Abu Batu Bara*, 2021, page. 18.

35 Timothy Townsend, *A Guide to the Use of Leaching Tests in Solid Waste Management Decision Making*, 2003.

36 Sudharto P. Hadi, Pilihan Penyelesaian Sengketa Lingkungan Potensi dan Kendalanya di Indonesia, *Makalah Seminar Sosialisasi*, 2002, page.11.

specifically related to the management of coal FABA waste, it was previously regulated in Government Regulation Number 101 of 2014 concerning Management of Hazardous and Toxic Waste. In the regulation, coal FABA waste is one type of waste that is included in the category of hazardous and toxic waste (B3 waste) with waste codes B409 and B410 in the Attachment to the List of B3 Waste from Non-Specific Sources. The concept of managing coal FABA waste when it was still a B3 waste refers to Government Regulation Number 101 of 2014 and its criminal consequences are regulated in Law Number 32 of 2009 concerning Environmental Protection and Management.

In Government Regulation Number 101 of 2014 concerning Management of Hazardous and Toxic Waste, coal FABA waste must be managed massively and carefully "from cradle to grave", meaning that it is a waste producer (in this case is a corporation, both the PLTU manager and the company holding the power plant). contract to carry out FABA waste management) is obliged to understand, know, and recognize the FABA waste produced, who will carry out the transportation, the location of the transportation destination, the storage mechanism, and so on. In terms of utilizing FABA waste, corporations must have a B3 waste utilization permit from the Ministry of Environment and Forestry, including in the transportation procedure. The management is in accordance with what is stipulated in Article 25 Paragraph (1) of Government Regulation Number 101 of 2014 concerning Management of Hazardous and Toxic Waste.

2) Forms of Corporate Criminal Liability Against Offenses in the Field of Coal FABA Waste Management as Hazardous and Toxic (B3) Waste.

In this study, the authors chose the Tenggarong District Court Decision Number 526/Pid.Sus-LH/2017/PN.Trg as material for analysis related to forms of criminal liability for offenses in the field of coal FABA waste management as B3 waste. In the decision, PT Indominco Mandiri did not manage B3 in the form of fly ash and bottom ash stockpiled in open land without a permit from 2014 to 2015 as much as ± 4,000 tons and based on PP. 101 of 2014 concerning B3 Waste Management, the waste meets the characteristics as B3 waste. The lab results show that fly ash/bottom ash has the potential to contain various types of heavy metals, although on a relatively small trace concentration scale (tracing) it must still be treated as B3 waste as stipulated in PP no. 101 concerning B3 Waste Management Appendix I Table 4 List of B3 Waste from Specific Specific Sources with code B409 for fly ash and B410 for bottom ash. The alleged article is Article 103 in conjunction with Article 116 paragraph (1) letter a of Law Number 32 of 2009 concerning Environmental Protection and Management or Article 104 in conjunction with Article 116

paragraph (1) letter a of Law Number 32 of 2009 concerning Protection and Environmental Management (alternative charges).

In UUPPLH, criminal liability in the case of the position of PT. Indominco Mandiri can be delegated to corporations as stipulated in Article 104 in conjunction with Article 116 paragraph (1) letter a, where the elements of the crime are "any person" and "dumping waste and/or materials into environmental media without a permit". Because the Defendant, in this case is PT. Indominco Mandiri, is a corporation and capable of being responsible, so in accordance with the provisions of Article 104 in conjunction with Article 116 paragraph (1) letter a of Law Number 32 of 2009 concerning Environmental Protection and Management and the provisions of Article 28 paragraph (1) of the Supreme Court Regulation (PERMA)) Number 13 of 2016, then the criminal fine that will be imposed has provisions if the fine is not paid within 1 (one) month from the inkracht decision, the property of PT. Indominco Mandiri was confiscated and auctioned to pay the fines. Additional criminal sanctions are also imposed so that the Defendant makes improvements as a result of the crime, namely punishing the Defendant to manage/utilize B3 waste in the form of B3 fly ash and bottom ash piles near the manufacture of paving blocks in the PLTU PT. Indominco Mandiri as much as ± 4,000 tons independently and with a work contract with a licensed company.

In Government Regulation Number 101 of 2014 which places coal FABA waste as B3 waste, then this can be a burdensome situation for corporate actors to account for their actions. This is due to several things, namely:

a) The Defendant's actions did not support the government's program in good environmental management;
b) Dangers of hazardous waste fly ash/bottom ash which can damage/disturb the environment/health of living things.

With the elements of a criminal act committed by PT. Indominco Mandiri is an act of dumping waste without a permit where the waste in this case is fly ash and bottom ash/FABA coal waste (in the regulations at that time it was B3 waste), then the corporation, namely PT Indominco Mandiri, could be imposed a criminal sanction of a fine of Rp. 2,000,000,000.00 (two billion rupiah) as regulated in Article 104 UUPPLH and additional punishment in the form of an obligation to manage/utilize B3 waste in the form of fly ash and bottom ash B3 waste piles near the manufacture of paving blocks in the PLTU PT. Indominco Mandiri as much as ± 4,000 tons independently and with a work contract with a licensed company as an additional penalty as stipulated in Article 119 UUPPLH.

Criminal sanctions imposed on corporate actors who commit environmental crimes are often difficult to achieve the

level of environmental restoration and the expected deterrent effect on corporations. This is due to the nature of corporations that do not have mens rea so that proving the element of guilt often encounters difficulties. Criminal sanctions accommodated in UUPPLH to ensnare corporate actors include fines and imprisonment, most of which are subsidiary criminal sanctions. This creates new problems in environmental law enforcement efforts where the criminal sanctions imposed in fact do not affect the operational capability of the corporation, for example, it can be seen in the Annual Report of PT. Indo Tambangraya Megah, Tbk in 2017, where the fine of Rp. 2 billion has no impact on the company's finances and operations. This raises questions about the effectiveness of fines in criminal acts in the environmental field.

b. The Concept of Criminal Law against Offenses in the Coal FABA Management Sector in the Non-B3 Waste Management Framework (after the enactment of PP Number 22 of 2021 concerning the Implementation of Environmental Protection and Management)
   1) The Concept of Coal FABA Waste Management as Non-Hazardous and Toxic Waste (Non-B3)

      Currently, the requirements attached to the management of coal FABA waste originating from PLTU facilities refer to non-B3 waste management standards, where the management is based on Article 452 paragraph (5) of PP Number 22 of 2021. The entire management requirements and provisions are regulated in Chapter VII Part Three concerning Management of Non-B3 Waste PP No. 22 of 2021. Provisions for the management of coal FABA waste that have changed from the previous requirements include:
      a) Storage, reuse and disposal no longer require a permit— all coal ash management, except for final disposal requirements, is included in the "environmental approval" granted to producers or third-party managers as part of their business license (Article 452 of Government Regulation Number 22 of 2021);
      b) Elimination of criminal sanctions for illegal coal ash management (Article 21-22 of Law Number 11 of 2020 which abolishes Article 102 of UUPPLH) and unclear consequences for prohibited actions (Article 453 of Government Regulation Number 22 of 2021);
      c) There are no restrictions on temporary storage of coal ash and no restrictions on storage in disaster-prone areas (although storage regulations require placement decisions to "consider safe distances from waters such as high tide lines, ponds, swamps, springs, rivers, and resident wells") (Article 455 and Article 457 of Government Regulation Number 22 of 2021);
      d) There are no arrangements for the transport of coal ash, which means that, in addition to the increased risk of release

during transport, chain tracking for the custody of coal ash that is not handled properly will become nearly impossible;[37]

e) There is no restriction on "reusable" coal ash and although the regulation includes a more detailed description of the methods that may be used, it does not distinguish between higher or lower risk reuse (Article 459-464 Government Regulation No. 22 year 2021).

2) Concept of Criminal Law against Offenses in the Coal FABA Waste Management Sector in the Non-B3 Waste Management Framework (after the enactment of PP Number 22 of 2021 concerning Implementation of Environmental Protection and Management)

In carrying out its role, criminal law faces limitations due to its dependence on administrative law, this can be interpreted that the punishment for environmental damage and pollution is limited in such a way that what can be considered criminal acts and can be subject to sanctions are mostly violations of administrative obligations.[38] It should be noted that the administrative sanctions regulated in Article 76 of the UUPPLH are in the form of a written warning; government coercion; freezing of environmental permits; and revocation of environmental permits. Referring to Article 10 of the Criminal Code (KUHP), Muladi introduced the concept of a criminal stelsel which covers the type of crime (strafsoord), the burden of criminal sanctions (straafmaat), and regarding how to carry out the crime (strafmodus) where criminal sanctions can be in the form of basic criminal sanctions. and additional criminal sanctions.[39] Thus, in the criminal act of managing coal FABA waste, the accumulation of basic criminal sanctions and additional criminal sanctions, including administrative sanctions, is applied.

With the current status of coal FABA waste originating from PLTU facilities, it is no longer B3 waste, but is non-B3 waste registered through Government Regulation Number 22 of 2021, the environmental criminal enforcement policy that applies follows the non-B3 waste criminal policy. An act that can be punished is an act that violates the provisions on waste management as regulated in Law Number 32 of 2009, with the exception of criminalizing B3 waste. The criminal sanctions applied are imprisonment and fines, where the principle of absolute responsibility can no longer be used for corporations that commit crimes as regulated in Article 88 of the UUPPLH. In fact, Muladi expressed his opinion that absolute responsibility by corporations is not based on subjective errors, but is carried out based on the collective interests of the community where absolute responsibility

37 Margaretha Quina, dkk, *Resiko Kelabu Abu Batu Barat*, 2021, page. 17.

38 MG. Faure, *Kekhawatiran Masa Kini Pemikiran Mengenai Hukum Pidana Lingkungan Dalam Teori dan Praktek,* PT. Citra Aditya Bakti, Jakarta, 1994), page. 34.

39 Muladi, Pembaruan Hukum Pidana Yang Berkualitas Indonesia, *Jurnal Masalah-Masalah Hukum,* No.2, 1988, page. 28.

is an effort to lean towards a balance of social interests.[40] In the context of environmental law, the doctrine of absolute liability by corporations in the criminal sphere is a very large contribution because cases of environmental damage by corporations are actions that cause harm to the environment and society and are classified as dangerous actions, which are therefore strict liability. liability) can be applied as agreed by James E. Kries in his writing entitled Environmental Litigation and the Burden of Proof.[41]

If you look at the previous precedents for corporate criminal acts in the field of coal FABA waste management, it can be seen that the imposition of criminal liability on corporations is carried out by looking at the functional side of the company. This is in line with the functional actor teaching theory, where corporations are seen as not being able to commit criminal acts themselves, but rather the actions are transferred to the management of the corporation as long as they are within the scope of carrying out the duties and functions stipulated in the articles of association of the corporation. Therefore, if the management commits a criminal act, basically the act is a criminal act committed by the corporation.[42] This concept is also seen in the provisions of Article 118 UUPPLH. Article 116 paragraph (1) letter a itself positions the corporation as a subject of environmental criminal law who can be held accountable when committing a criminal act. There has been no precedent regarding the current criminal act of managing coal FABA waste since PP No. 22 of 2021 was enacted. However, based on the provisions of the applicable environmental laws and regulations, namely UUPPLH, the punishment of these corporate actors no longer uses the policy of criminalizing B3 waste, both materially, elements of criminal acts, or circumstances that can incriminate.

The use of criminal law as a means of enforcing environmental law and ensuring that the implementation of environmental utilization is carried out in a sustainable manner seems to encounter obstacles, in this case not limited to the criminal provisions that have been accommodated by law, but also the neglect of the existence of the modus operandi and sources or means of environmental crimes. the. Coal FABA waste from PLTU facilities which produces hundreds of thousands of tons of residue annually is removed from the B3 waste category without credible scientific evidence and is able to support the government's decision optimally. The decision indirectly opens up opportunities for pollution and environmental damage around the power plant,

40 Hatrik, Hamzah, *Asas Pertanggungjawaban Korporasi Dalam Hukum Pidana Indonesia (Strict Liability dan Vicarious Liability)*, PT Raja Grafindo Persada, Jakarta, 2002, page. 188.

41 Koesnadi Hardjasoemantri, *Hukum Tata Lingkungan,* Gadjah Mada University Press, Yogyakarta, 2002, page. 387.

42 Ali, Mahrus, *Asas-asas Hukum Pidana Korporasi*, Rajagrafindo Husada, Yogyakarta, 2013, page. 174.

which will have an impact on environmental sustainability and public health status. The provision of criminal sanctions in the framework of B3 waste management is still quite ineffective, seen from the condition of the affected environment which has not been fully reclaimed since the decision was read and the existence of recidivists. However, currently there is a change in norms so that the sanctions that can be imposed on corporations are increasingly limited.

D. CONCLUSION

Based on the discussion of the problems that have been discussed previously, the following conclusions can be drawnt:

1. In deciding the issuance of fly ash and bottom ash waste or coal FABA from PLTU facilities from the category of Hazardous and Toxic Waste (B3) through Government Regulation Number 22 of 2021 concerning Implementation of Environmental Protection and Management, there is no open scientific data based on research. credible basis for the government to remove the status of FABA waste which can show the suitability of the characteristics of FABA waste with the expected management and utilization media in a comprehensive manner. Empirically, there are several track records of coal FABA waste management in Indonesia from 2014 to 2020 (before coal FABA waste was included in the non-B3 waste category), which shows that law enforcement efforts against corporate criminal acts in the field of coal FABA waste management have not yet been established. is at the maximum.
2. The current regulatory regime for coal FABA waste management refers to Government Regulation Number 22 of 2021 concerning the Implementation of Environmental Protection and Management, in which case coal FABA waste must be managed according to non-B3 waste management standards in line with the issuance of coal FABA waste from the coal FABA waste category. B3 waste after the revocation of Government Regulation Number 101 of 2014. Several significant changes arising from the change in norms include the inability to apply the provisions of Article 88 of the UUPPLH, the inability to use the fact of B3 waste which previously could be used as an excuse for criminal acts, and the concept of a mechanism coal FABA waste management no longer uses strict B3 waste management standards. Criminal sanctions that can be imposed on corporate actors who commit criminal acts in the field of coal FABA waste management are fines.

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